

## **BUILDING DIVISION**

## **PLAN CHECK NOTE**

**From: Building Plan Check**

**PCN #19**

**Effective Date: 7/14/08**

**Subject:** Understanding the limit of projections

**Code references:** 2007 CBC, section 704.2 and tables 704.8, 601, and 602

**Purpose:**

The purpose of this document is to combine these tables and footnotes in a easy to understand format. Key interpretations are explained.

**Background:**

CBC Section 704.2 allows projections to extend  $\frac{1}{3}$  the distance to where protection of opening is required, or 12" to where they are prohibited. The code references table 704.8, which specifies the maximum allowable openings based on proximity to property lines. It does not directly specify where protection of opening is required. Additionally, the footnotes have specific provisions and references to tables 601 and 602.

**Findings:**

1. Begin by using the total open area of the wall plane, regardless of the actual distance from the property line to the building, use the total open area of the wall plane. This area is the combined area of all openings, protected and unprotected, and includes windows, vents, and doors. Based on the row for unprotected openings in table 704.8, look up the distance to a property line a wall could be with the proposed open area. This is the plane where a larger open area would require some of them to be protected, based on equation 7-2. Use this plane to calculate the  $\frac{1}{3}$  distance for projections. This point  $\frac{1}{3}$  to the property line is the extent to which a projection may extend regardless of where the wall really is. If the wall is already closer than this point, no projection is allowed.
2. If the building is protected by sprinklers, then per 704.8.1, the area of unprotected openings is increased to that of protected opening. This also means that no opening is required to be protected. The City of San Jose does interpret this to mean that there is no plane where protection of opening is required. To determine the plane where protection of opening is required, the building is reviewed as if there were no sprinklers. The result is that the opening area is larger, but there is no increase in projections.

3. For R-3 occupancies, footnote c to table 704.8 is not to be used in conjunction with equation 7-2. The allowable area of protected and unprotected openings is not 15% and 10% respectively. The total area of all openings is limited to 25%, and there is no plane where openings must be protected.
4. U occupancies attached to an R3 occupancy are treated the same as an R3 for these provisions per footnote c to 704.8. This does include U occupancies detached from R3 occupancies.
5. Footnote e to table 601 (sprinkler substitution for 1-hr) does not allow the exterior wall construction to be reduced, therefore footnote i to table 704.8 does not allow unlimited opening area and thereby allowing longer projections.

### **Conclusion:**

The length of projections is inversely proportional to the area of openings in the wall. The greater the openings, the smaller the projections are allowed, as shown in the following table.

## **Maximum Projections**

<b>Occupancy classification</b>	<b>Opening Area</b>	<b>Plane where protection of opening is required</b>	<b>Plane where openings are prohibited</b>	<b>Max projection (min distance to property line)</b>
<b>R3</b> (and accessory U, attached or detached)	≤25% >25%	None None	3' 3'	<b>2'</b> <b>2'</b>
<b>U</b>	≤10% >10%	None None	5' 5'	<b>4'</b> <b>4'</b>
<b>II-B and V-B all occupancies (except H &amp; L) and Open Garages (all const types)</b>	≤10% >10%	None 10'	5' 5'	<b>4'</b> <b>6'8"</b>
<b>Everything else</b>	≤10% 10%<A≤15% 15%<A≤25% 25%<A≤45% 45%<A≤70% >70%	None 10' 15' 20' 25' 30'	5' 5' 5' 5' 5' 5'	<b>4'</b> <b>6'8"</b> <b>10'</b> <b>13'4"</b> <b>16'8"</b> <b>20'</b>